

AMENDMENTS TO THE SPECIFICATION

Please amend the specification as follows:

Page 8, lines 16 to 18

FIG. 2 is a block diagram of an embodiment of the image processing apparatus of the invention in the digital photoprinter shown in FIG. 1; and

FIG. 3 is a flowchart showing an example of the flow of the process in which whether or not the red eye correction is to be performed is automatically determined in an operation setting section of the image processing apparatus shown in FIG. 2 based on photographing information.

Page 10, line 7 to page 11, line 14

The illustrated photoprinter 10 has dedicated carriers 30 available that can be selectively mounted in the housing of the scanner 12 depending upon such factors as the type and size of films such as an Advanced Photo System and negatives (or reversals) of 135 size, the physical form of the film (e.g. whether it is a strip or a slide) and the kind of treatment to be applied (e.g. trimming). By changing carriers 30, the photoprinter 10 is capable of handling various kinds of films and treatments.

An image (frame) recorded on a film and used to create a print is transported to and held at a prescribed reading position by the carrier 30.

As known well, the film of an Advanced Photo System has a magnetic recording medium formed thereon and various kinds of data are recorded to the magnetic recording medium in photographing and development. A carrier 30 for the film (cartridge) of Advanced Photo System is provided with a means 30a for reading the magnetic information. Thus, when the film is transported to a reading position, the magnetic information is read and necessary information is sent to the processor 14, the necessary information encompassing a photographing date, the type of a film developing machine, a cartridge ID, whether an electronic flash was used or not in photographing, a subject brightness range (BV value), a photographing distance, the positions of main elements in a picture, and the like.

In the scanner 12, reading light issuing from the illuminant 22 is adjusted in quantity by passage through the variable diaphragm 24, then passed through the color filter plate 26 for color adjustment, and diffused in the diffuser box 28; the thus treated reading light is incident on a frame of the film F which is held at a prescribed reading position by a carrier 30, through which it is transmitted to produce projected light that carries the image in the particular frame of the film F.

Page 15, line 17 to page 16, line 1

These corrections may be performed by any known methods by suitably combining operations for image processing, processing with LUTs (look-up tables), matrix (MTX) operations, processing with filters and the like. In the illustrated example, gray balance adjustment, brightness correction and contrast correction are performed using a correction look-up table (LUT) in an LUT block, saturation correction is performed by matrix operations in an MTX block and sharpening is performed by means of averaging using an unsharpness mask (USM) in a USM block.

Dodging and other processes are performed in a block 50A and a block 54A in response to an operator's command or in accordance with image data.

Page 16, line 4 from the bottom to page 17, line 14

In the processor 14 according to the present invention, the output image memory 56 is interposed between the processing subsection 54 of the finely scanned image processing section 46 and the color transform signal processing subsection 58 and the red eye correction processing subsection 60 is connected to the output image memory 56. Switching means 55 is provided between the processing subsection 54 and the output image memory 56 and is capable of switching the connection from the USM block of the

processing subsection 54 between the output image memory 56 and the color transform signal processing subsection 58. Thus, the USM block of the processing subsection 54 can be connected to the output image memory 56 or directly connected to the color transform signal processing subsection 58 with the output image memory 56 being bypassed.

In the illustrated example, when red eye correction processing is not performed, the USM block of the processing subsection 54 is directly connected to the color transform signal processing subsection 58 by the switching means 55 provided between the processing subsection 54 and the output image memory 56 and the image data processed with the processing subsection 54 is supplied to the color transform signal processing subsection 58 without passing through the output image memory 56, whereas when the red eye correction processing is performed, the USM block of the processing subsection 54 is connected to the output image memory 56 by the switching means 55 and the image data processed with the processing subsection 54 is stored in the output image memory 56 once and then supplied to the color transform signal processing subsection 58 after it is processed by the red eye correction processing subsection 60.

Page 26, line 11 to page 27, line 14

When the red eye correction processing is not performed, if the operator concludes that the image displayed on the display 20 is appropriate (i.e., the result of the verification is satisfactory), he manipulates the keyboard 18a or the like to enter a command for starting the printing operation. As a result, the image processing conditions are finalized and the finely scanned data is read from the fine scan memory 42, processed in the processing subsection 54 in the finely scanned image processing section 46 under the finalized conditions. Since the processing subsection 54 is directly connected to the color transform signal processing subsection 58 by the switching means 55 of the finely scanned image processing section 46 during this process, the finely scanned image data processed in the processing subsection 54 does not pass through the output image memory 56 but is sent to the color transform signal processing subsection 58, where it is converted to image data associated with the image recorded by the printer 16, to which it is subsequently sent.

When neither the verification nor the red eye correction processing is performed, the image processing conditions are finalized at the point of time when the parameter coordinating subsection 76 ended the setting of those conditions in the processing subsection 54 of the finely scanned image processing

section 46, whereupon the finely scanned data is processed automatically in the same manner as above and sent to the printer 16.

It is preferable that working modes such as red eye correction execution mode in which red eye correction processing is performed; red eye correction non-execution/verification execution mode (verification mode) in which image data is verified but is not subjected to red eye correction processing; and red eye correction non-execution/verification non-execution mode (automatic printing mode) in which neither verification nor red eye correction processing is performed be set in advance as described below so that the operator can select one of them through the manipulating unit 18.

In the red eye correction execution mode, as mentioned above, when the region including an eye is indicated by the operator, the image processing conditions of the processing subsection 54 in the finely scanned image processing section 46 are finalized, the finely scanned data is read from the fine scan memory 42 and the image data is processed with the processing subsection 54. Since the USM block of the processing subsection 54 is connected to the output image memory 56 by the switching means 55 of the finely scanned image processing section 46 during this process, the image data processed with the processing subsection 54 is stored in the output image memory 56.

Page 30, line 4 to page 31, line 12

As mentioned above, according to the image processing apparatus of the invention, a red eye can be corrected more effectively and more promptly as compared with a conventional apparatus. However, when the red eye is corrected in the invention, productivity is also dropped as compared with a print created ordinarily without correcting the red eye.

To cope with this problem, it is preferable in the invention to dispose operation setting section 78 in the image processing apparatus 14 as shown in FIG. 2 and set whether the red eye correction processing is to be performed or not (execution/non-execution) as a working mode in the image processing apparatus 14 so that the execution of it can be optionally selected using the manipulating unit 18. Further, the mode of the execution/non-execution of the red eye correction processing and the above mode of the execution/non-execution of the verification may be set in the operation setting section 78 as a combined mode (for example, a mode for executing both verification and red eye correction processing, a mode for not executing verification but executing red eye correction processing, a mode for not executing red eye correction processing but executing verification, a mode for not executing verification or red eye correction processing, etc). It should

be noted here that the operator may confirm an image before correction and determine whether the red eye correction processing is necessary or not even in the red eye correction execution mode, as mentioned above.

It is preferable that the operator select execution or non-execution of the red eye correction for each frame in accordance with a prescanned image, the image recorded on a film, photographing information and the like and further in accordance with the desire of a customer to red eye correction when he requests to make development and prints simultaneously or requests to make extra prints, the information recorded on the ID card of the customer, and the like, such that the operator can determine and indicate in the operation setting section 78 through the manipulating unit 18 whether a red eye effect must be corrected or not (whether switching is to be made in the switching means 55, 70 and 62) for each frame.

When photographing information can be obtained from a film and the like as in the case of an Advanced Photo System by means of magnetic information reading means 30a such as a magnetic head mounted on the carrier 30 of the scanner 12, it is also preferable to input the photographing information for each frame of a film to the operation setting section 78 and automatically determine in the operation setting section 78 for each frame whether the red eye

correction processing must be performed or not using the photographing information.

Page 32, after the first Paragraph ending on line 8, please insert the following new paragraphs

For example, whether or not the red eye correction processing is to be performed can be automatically determined in the operation setting section 78 for each frame using the photographing information as in the flowchart shown in FIG. 3.

More specifically, as shown in the flowchart of FIG. 3, in Step S100, photographing information is acquired in the operation setting means 78 from the scanner 12.

Next, in Step S102, it is determined whether or not the photographing information indicates the use of electronic flash in the photography. If electronic flash is not used in the photography (NO), the operation proceeds to Step S104, where it is deemed that the red eye effect is unlikely to occur and non-execution of the red eye correction processing is thus automatically determined.

On the other hand, if it is determined in Step S102 that electronic flash is used in the photography (YES), it is determined in Step S106 whether or not the photographing information is information in which at least one of the subject brightness range, photographing distance, positions of main

elements in a picture, focal length of a lens, and type of a camera satisfies the specified conditions as mentioned above.

If it is determined in Step S106 that the information satisfies the specified conditions (YES), the operation proceeds to Step S108, where it is deemed that the red eye effect is quite likely to occur and execution of the red eye correction processing is thus automatically determined. If it is determined in Step S106 that the information does not satisfy the specified conditions (NO), the operation proceeds to Step S104, where it is deemed that the red eye effect is unlikely to occur and non-execution of the red eye correction processing is thus automatically determined.

It is preferable that whether or not the red eye correction processing is to be performed be thus automatically determined in the operation setting section 78 based on the photographing information. However, when it is determined in Step S102 that electronic flash is used in the photography (YES), the operation may immediately proceed to Step S110 as shown by a dotted line of the flowchart in FIG. 3 to automatically determine execution of the red eye correction processing, even if the red eye effect is less likely to occur than the case where the determination in Step S106 is YES.